

REMARKS

Applicants thank the Patent Office for the careful attention accorded this Application and respectfully requests consideration in view of the Amendment above and remarks set forth below.

In response to the Office Action mailed July 14, 2005, Applicants have canceled claims 57-68 without prejudice or disclaimer and have added rewritten claims 69-76 in order to more clearly point out and distinctively claim the present invention over the prior art of record. Applicants reserve the right to continue prosecution of the subject matter set forth in the cancelled claims in one or more continuation applications.

Applicants also submit herewith replacement sheets of the formalized drawings for Figs. 7C1 and 7C2. Applicants' records show that these drawing sheets were previously submitted on June 24, 2004.

Applicants have reviewed the cited prior art references in the Office Action, namely US Patent No. 6,123,261 to Roustaei, US Patent No. 5,545,886 to Metlitsky et al, and US Patent No. 5,340,971 to Rockstein et al, and firmly believe that these prior art references do not detract from the patentability of the subject matter defined by the rewritten Claims 69-76.

When considered alone, or in combination with each other, Applicant's firmly believe that the prior art of record clearly fails to disclose, teach or suggest the hand-supportable digital imaging-based bar code symbol reading device as defined in independent Claim 69, which supports narrow-area and wide-area modes of illumination and image capture, and requires, *inter alia*:

a multi-mode LED-based illumination subsystem, disposed in said hand-supportable housing, including (i) a first LED-based illumination array for producing a narrow-area field of narrow-band visible illumination within the FOV of said image formation and detection subsystem during said narrow-area image capture mode, and (ii) a second LED-based illumination array for producing a

wide-area field of narrow-band visible illumination within the FOV of said image formation and detection subsystem during said wide-area image capture mode;

an automatic light exposure measurement and illumination control subsystem, disposed in said hand-supportable housing, for supporting the following operations,

(i) automatically driving the first LED-based illumination array when said device is operated in said narrow-area image capture mode, and the second LED-based illumination array when said device is operated in said wide-area image capture mode, so that objects within the FOV of said device are illuminated with said narrow-band visible illumination,

(ii) automatically measuring the light exposure incident upon a central portion of said FOV using a photo-detector independent and separate from said area-type image sensing array, and

(iii) automatically controlling said first and second LED-based illumination arrays so that objects within the FOV of said device are exposed to narrow-band visible illumination having an intensity and a duration sufficient for the formation and detection of high quality digital images at said area-type image sensing array; and

a narrow-band optical filter subsystem realized by a high-pass filter element mounted at said light transmission aperture, and a low-pass filter element mounted either before said area-type image sensing array or anywhere after said light transmission aperture, and permitting only said narrow-band visible illumination to be transmitted to said area-type image sensing array, whereas all other components of ambient light collected by said image formation optics are substantially rejected prior to incidence at said area-type image sensing array, as claimed.

While US Patent No. 6,123,261 to Roustaei discloses a CCD sensor having three different scanning modes, this prior art reference fails to disclose, teach or suggest a multi-mode LED-based illumination subsystem having first and second LED-based illumination arrays for

producing narrow-area and wide-area fields of narrow-band visible illumination, as defined by rewritten Claim 69.

US Patent No. 5,545,886 to Metlitsky et al discloses (in Fig. 14) the use of (i) a 2D array of light sources 10, 11 (e.g. laser diodes or LEDs) that are selectively activated during scanning operations to emulate a “flying spot” light beam for illuminating an object (using stationary components), and (ii) a single photo-detector 15 for detecting illumination reflected from a “scanned” object, and for generating a corresponding analog scan data signal, as illustrated in Fig. 8. However, the light emitting diode array 10 disclosed in US Patent No. 5,545,886 is intended for flying-spot type bar code reading systems; there is no disclosure of using this illumination array for 2D digital image-processing based bar code symbol readers. Also, as disclosed, the light emitting diode array 10 in US Patent No. 5,545,886 is not capable of generating a narrow-area field of narrow-band visible illumination during a narrow-area mode of image capture, and a wide-area field of narrow-band visible illumination during a wide-area mode of image capture, as defined by rewritten Claim 69.

US Patent No. 5,340,971 to Rockstein et al. is directed to laser scanning bar code symbol reading systems, and does not detract from the present invention as claimed.

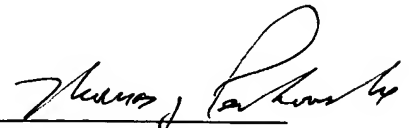
In view therefore, of the Amendment and remarks set forth above, the present invention defined by rewritten Claims 69-76 is firmly believed to be neither anticipated by, nor rendered obvious in view of the prior art of record, and that the present application is now in condition for allowance.

Favorable action is earnestly solicited.

The Commissioner is hereby authorized to any fee deficiencies to Deposit Account No. 16-1340. A copy of this page is enclosed herewith.

Respectfully submitted,

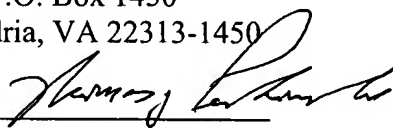
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